

MACHINING CONDITIONS

APMT 0903 PDTR – LT 3000

Catalog N°: M0004161

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	DOC [mm]		Feed [mm/rev]		V _c [m/min]		Suggested Starting Parameters			
					min	max	min	max	min	max	DOC	Feed	V _c	
P	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	8	0.11	0.2	190	330	2	0.14	250
		2			190 HB	0.5	8	0.11	0.2	190	300	2	0.14	220
		3			250 HB	0.5	8	0.11	0.2	190	250	2	0.14	200
	Low Alloyed	2	4, 6	42CrMo4, S150, Ck60, 4140, 4340, 100Cr06	180 HB	0.5	8	0.09	0.16	150	210	2	0.12	180
		5, 7			230 HB	0.5	8	0.09	0.14	130	190	2	0.11	150
		6			280 HB	0.5	8	0.09	0.16	150	240	2	0.12	200
		8			350 HB	0.5	8	0.09	0.14	130	170	2	0.11	140
		10			220 HB	0.5	5.7	0.07	0.14	90	150	1.5	0.11	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	280 HB	0.5	5.7	0.07	0.14	90	130	1.5	0.11	120
		11			320 HB	0.5	5.7	0.07	0.11	60	110	1.5	0.1	100
		11			350 HB	0.5	5.7	0.07	0.11	60	90	1.5	0.1	80
M	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	8	0.09	0.16	190	250	2	0.12	220
		14			240 HB	0.5	8	0.07	0.14	160	210	2	0.12	190
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	5.7	0.07	0.11	70	130	1.5	0.1	100
		14			310 HB	0.5	5.7	0.07	0.11	70	120	1.5	0.1	90
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4PH, 430	200 HB	0.5	8	0.09	0.16	150	210	2	0.12	190
		13			42 HRc	0.5	5.7	0.09	0.13	90	150	1.5	0.1	130
K	Grey	7	15	GG20, GG40, EN-GJL-250	150 HB	0.5	8	0.11	0.2	150	240	2	0.14	200
		15			200 HB	0.5	8	0.11	0.2	150	220	2	0.14	180
		16			250 HB	0.5	8	0.11	0.2	150	190	2	0.14	160
	Malleable & Nodular	8	17, 19	GG20, GG70, 50005	150 HB	0.5	8	0.09	0.18	100	200	2	0.12	180
		17, 19			200 HB	0.5	8	0.09	0.18	100	180	2	0.12	150
		18, 20			250 HB	0.5	8	0.09	0.18	100	150	2	0.12	130
S	Fe, Ni & Co based	9	31, 32	Incoloy 800	240 HB	0.5	5.7	0.07	0.11	30	50	1.5	0.1	32
		33		Inconel 700	250 HB	0.5	5.7	0.07	0.11	30	50	1.5	0.1	30
		34		Stellite 21	350 HB	0.5	5.7	0.07	0.11	30	50	1.5	0.1	30
	Ti based	10	36	TiAl6V4	-	0.5	5.7	0.07	0.11	30	60	1.5	0.1	40
		37		T40	-	0.5	5.7	0.07	0.13	40	70	1.5	0.11	55
H	Steel	11	38	X100 CrMo13, 440C,	45 HRc	0.5	2.8	0.06	0.11	40	80	1	0.08	60
		38		G-X260NiCr42	55 HRc	0.5	1.2	0.06	0.09	40	60	0.5	0.07	50
		12	40	Ni-Hard 2	400 HB	0.5	2.3	0.06	0.11	40	80	0.8	0.08	50
	Chilled Cast Iron	13	41	G-X300CrMo15	55 HRc	0.5	1.2	0.06	0.09	30	60	0.5	0.07	40
	White Cast Iron													
NF	Aluminium	14	25	AlSi12	130 HB	0.5	8	0.11	0.2	200	400	2	0.15	280

